

## SEQUENCE LISTING

<110> Aventis Pasteur Limited  
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 Raudonikiene, Ausra  
 Gallichan, Scott  
 Murdin, Andrew

<120> Chlamydia mgp002

<130> APL-03-03-PCT

<150> 60/481,690

<151> 2003-11-21

<160> 14

<170> PatentIn version 3.3

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<212> DNA

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 Lys Ser Ala Ile Ile Gly Ala Gly Leu Ser Gly Ser Ser Glu Thr Leu  
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gat cta ctg tct gaa tcc ata gaa aca cag gat ctt tat gag cag cta 336  
 Asp Leu Leu Ser Glu Ser Ile Glu Thr Gln Asp Leu Tyr Glu Gln Leu  
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330

335

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 Tyr Leu Gln Gln Ser Leu Phe Ser Glu Asp Ala Tyr Val Arg Lys Ser  
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 Ala Ile Ile Gly Ala Gly Leu Ser Gly Ser Ser Glu Thr Leu Asp Leu  
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Ile Gly Glu Tyr Gln Gln Arg Arg Phe Leu Pro Thr Leu Arg Ser Leu				
195	200	205		
ctt acc agc gca gct cct tta gac caa gaa gga tct ttg tat gct ata				672
Leu Thr Ser Ala Ala Pro Leu Asp Gln Glu Gly Ser Leu Tyr Ala Ile				
210	215	220		
gga aaa tta gaa gat gcc agc agc tat cct aaa atc aaa gca tta agc				720
Gly Lys Leu Glu Asp Ala Ser Ser Tyr Pro Lys Ile Lys Ala Leu Ser				
225	230	235	240	
tcc aaa tct aac cct gaa gtg gct ctt gct gct cag aca tta tta				768
Ser Lys Ser Asn Pro Glu Val Ala Leu Ala Ala Gln Thr Leu Leu				
245	250	255		
ttc ttg ggt aaa gaa gat gag gct ctt cct atc cta act act ttt tgc				816
Phe Leu Gly Lys Glu Asp Glu Ala Leu Pro Ile Leu Thr Thr Phe Cys				
260	265	270		
cag caa gag ctt cct cga gct att tat acc tct cgt ttc ctt tca tta				864
Gln Gln Glu Leu Pro Arg Ala Ile Tyr Thr Ser Arg Phe Leu Ser Leu				
275	280	285		
gaa aaa gga gaa gag ctt ctt tta ccc atc ttt tgt aaa gct att aaa				912
Glu Lys Gly Glu Glu Leu Leu Pro Ile Phe Cys Lys Ala Ile Lys				
290	295	300		
gaa gaa att aaa ctg aat gct gct ttg gct ctt gtc cac ttg gga agc				960
Glu Glu Ile Lys Leu Asn Ala Ala Leu Ala Leu Val His Leu Gly Ser				
305	310	315	320	
gtt aat cac cta gtg ctt agt tat tta aca gaa ttt tta gaa aat aaa				1008
Val Asn His Leu Val Leu Ser Tyr Leu Thr Glu Phe Leu Glu Asn Lys				
325	330	335		
att ctc cac cgc ata ttt tta ccc acc cat tcg ata gga aaa gcc acg				1056
Ile Leu His Arg Ile Phe Leu Pro Thr His Ser Ile Gly Lys Ala Thr				
340	345	350		
cag ttt tgg aaa gag tgt acg gca ctc cct ctt cta agc cca gaa gaa				1104
Gln Phe Trp Lys Glu Cys Thr Ala Leu Pro Leu Leu Ser Pro Glu Glu				
355	360	365		
aaa gca aga gct ttg gca atg tat cgc gca gca gaa gat acg atc ctc				1152

370

375

380

tct	agt	tta	tta	aaa	tta	cct	aac	aat	gcc	tat	ctg	cct	tat	ttg	gaa	1200
Ser	Ser	Leu	Leu	Lys	Leu	Pro	Asn	Asn	Ala	Tyr	Leu	Pro	Tyr	Leu	Glu	
385					390				395				400			
cgt	att	cta	act	tca	caa	aaa	acc	cct	cta	gca	gct	aaa	gct	att	gct	1248
Arg	Ile	Leu	Thr	Ser	Gln	Lys	Thr	Pro	Leu	Ala	Ala	Lys	Ala	Ile	Ala	
					405				410				415			
ttt	tta	tca	gta	aca	gct	cat	cct	cag	gca	ctt	tct	tta	gtc	tcg	aaa	1296
Phe	Leu	Ser	Val	Thr	Ala	His	Pro	Gln	Ala	Leu	Ser	Leu	Val	Ser	Lys	
					420				425				430			
gca	gca	cta	act	cca	gga	gac	cct	atc	att	cgc	gct	tat	gcg	aat	tta	1344
Ala	Ala	Leu	Thr	Pro	Gly	Asp	Pro	Ile	Ile	Arg	Ala	Tyr	Ala	Asn	Leu	
					435				440				445			
gct	tta	tat	aca	atg	acg	caa	gat	cct	gaa	aag	aaa	gcc	tta	tta	tat	1392
Ala	Leu	Tyr	Thr	Met	Thr	Gln	Asp	Pro	Glu	Lys	Lys	Ala	Leu	Leu	Tyr	
					450				455				460			
caa	tat	gcc	gaa	cag	tta	ata	gga	gac	acg	att	ttg	ttt	aca	gat	gag	1440
Gln	Tyr	Ala	Glu	Gln	Leu	Ile	Gly	Asp	Thr	Ile	Leu	Phe	Thr	Asp	Glu	
					465				470				475			
gag	aat	ccc	ctg	cct	tct	ccc	cat	tct	tcc	tac	ctg	cga	tat	caa	gtg	1488
Glu	Asn	Pro	Leu	Pro	Ser	Pro	His	Ser	Ser	Tyr	Leu	Arg	Tyr	Gln	Val	
					485				490				495			
tcc	cca	gaa	act	cgt	tct	caa	ctc	atg	cta	act	att	tta	gaa	acc	cta	1536
Ser	Pro	Glu	Thr	Arg	Ser	Gln	Leu	Met	Leu	Thr	Ile	Leu	Glu	Thr	Ieu	
					500				505				510			
gtt	tct	tct	aaa	act	gat	gaa	gac	atc	cga	gtt	ttt	ctt	tcg	cta	atg	1584
Val	Ser	Ser	Lys	Thr	Asp	Glu	Asp	Ile	Arg	Val	Phe	Leu	Ser	Leu	Met	
					515				520				525			
aaa	aaa	acc	cat	tac	aaa	aat	atc	ccc	atc	tta	tct	gga	tta	tta	atg	1632
Lys	Lys	Thr	His	Tyr	Lys	Asn	Ile	Pro	Ile	Leu	Ser	Gly	Leu	Leu	Met	
					530				535				540			
aga	ata	gtg	gag	cga	gct	cgg	tac	caa	gct	tac	gta	gaa	caa	aaa	ctc	1680
Arg	Ile	Val	Glu	Arg	Ala	Arg	Tyr	Gln	Ala	Tyr	Val	Glu	Gln	Lys	Leu	
					545				550				555			
atc	tca	gaa	gag	gat												1695
Ile	Ser	Glu	Glu	Asp												
				565												

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 <212> PRT  
 <213> Chlamydia muridarum

Met Cys Asp Phe Pro Pro Ser Val Ser Gln Lys Ile Leu Phe Leu Cys  
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Gln Lys Ser Ile Pro Gln Ala Leu Glu Ser Tyr Leu Glu Ala Ser Thr  
20 25 30

Thr Tyr Gln Gln His Asn Phe Ser Ile Leu Arg Leu Ile Ala Lys Ser  
35 40 45

Tyr Leu Gln Gln Ser Leu Phe Ser Glu Asp Ala Tyr Val Arg Lys Ser  
50 55 60

Ala Ile Ile Gly Ala Gly Leu Ser Gly Ser Ser Glu Thr Leu Asp Leu  
65 70 75 80

Leu Ser Glu Ser Ile Glu Thr Gln Asp Leu Tyr Glu Gln Leu Leu Ile  
85 90 95

Leu Asn Ala Ala Gly Asn Gln Leu Gly Lys Thr Ser Asp Arg Leu Leu  
100 105 110

Phe Lys Gly Leu Thr Ala Pro His Pro Ile Ile Arg Leu Glu Ala Ala  
115 120 125

Tyr Arg Leu Ala Cys Met Lys Asn Ser Lys Val Ser Asp Tyr Leu Tyr  
130 135 140

Ser Phe Ile His Gln Leu Pro Glu Glu Ile Gln Asn Leu Ala Ala Thr  
145 150 155 160

Ile Phe Leu Gln Leu Glu Thr Glu Glu Ala Asp Ala Tyr Val His Arg  
165 170 175

Leu Leu Ser Ser Pro Asn Ser Leu Thr Arg Asn Tyr Met Ala Tyr Leu  
180 185 190

Ile Gly Glu Tyr Gln Gln Arg Arg Phe Leu Pro Thr Leu Arg Ser Leu  
195 200 205

Leu Thr Ser Ala Ala Pro Leu Asp Gln Glu Gly Ser Leu Tyr Ala Ile  
210 215 220

Gly Lys Leu Glu Asp Ala Ser Ser Tyr Pro Lys Ile Lys Ala Leu Ser  
225 230 235 240

Ser Lys Ser Asn Pro Glu Val Ala Leu Ala Ala Ala Gln Thr Leu Leu  
245 250 255

Phe Leu Gly Lys Glu Asp Glu Ala Leu Pro Ile Leu Thr Thr Phe Cys  
260 265 270

Gln Gln Glu Leu Pro Arg Ala Ile Tyr Thr Ser Arg Phe Leu Ser Leu  
275 280 285

Glu Lys Gly Glu Glu Leu Leu Leu Pro Ile Phe Cys Lys Ala Ile Lys  
290 295 300

Glu Glu Ile Lys Leu Asn Ala Ala Leu Ala Leu Val His Leu Gly Ser  
305 310 315 320

Val Asn His Leu Val Leu Ser Tyr Leu Thr Glu Phe Leu Glu Asn Lys  
325 330 335

Ile Leu His Arg Ile Phe Leu Pro Thr His Ser Ile Gly Lys Ala Thr  
340 345 350

Gln Phe Trp Lys Glu Cys Thr Ala Leu Pro Leu Leu Ser Pro Glu Glu  
355 360 365

Lys Ala Arg Ala Leu Ala Met Tyr Arg Ala Ala Glu Asp Thr Ile Leu  
370 375 380

Ser Ser Leu Leu Lys Leu Pro Asn Asn Ala Tyr Leu Pro Tyr Leu Glu  
385 390 395 400

Arg Ile Leu Thr Ser Gln Lys Thr Pro Leu Ala Ala Lys Ala Ile Ala  
405 410 415

Phe Leu Ser Val Thr Ala His Pro Gln Ala Leu Ser Leu Val Ser Lys  
420 425 430

Ala Ala Leu Thr Pro Gly Asp Pro Ile Ile Arg Ala Tyr Ala Asn Leu  
435 440 445

Ala Leu Tyr Thr Met Thr Gln Asp Pro Glu Lys Lys Ala Leu Leu Tyr  
 450 455 460

Gln Tyr Ala Glu Gln Leu Ile Gly Asp Thr Ile Leu Phe Thr Asp Glu  
 465 470 475 480

Glu Asn Pro Leu Pro Ser Pro His Ser Ser Tyr Leu Arg Tyr Gln Val  
 485 490 495

Ser Pro Glu Thr Arg Ser Gln Leu Met Leu Thr Ile Leu Glu Thr Leu  
 500 505 510

Val Ser Ser Lys Thr Asp Glu Asp Ile Arg Val Phe Leu Ser Leu Met  
 515 520 525

Lys Lys Thr His Tyr Lys Asn Ile Pro Ile Leu Ser Gly Leu Leu Met  
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Arg Ile Val Glu Arg Ala Arg Tyr Gln Ala Tyr Val Glu Gln Lys Leu  
 545 550 555 560

Ile Ser Glu Glu Asp  
 565

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 1 5 10 15  
 cga aaa tca gtc cct caa gct cta gaa gcc tat ctc gaa gct tca gca 96  
 Arg Lys Ser Val Pro Gln Ala Leu Glu Ala Tyr Leu Glu Ala Ser Ala  
 20 25 30  
 act tat caa caa cac gat ttc tcc gta tta cgc gta ata gca gaa tcg 144  
 Thr Tyr Gln Gln His Asp Phe Ser Val Leu Arg Val Ile Ala Glu Ser  
 35 40 45

Tyr Leu Gin Gin Ser Phe Leu Ser Glu Asp Thr Tyr Ile Arg Lys Ser			
50	55	60	
gca att att gga gca ggg cta tct ggt tca tca gaa gct tta gag tta			240
Ala Ile Ile Gly Ala Gly Leu Ser Gly Ser Ser Glu Ala Leu Glu Leu			
65	70	75	80
ctg tct gag gct ata gaa acg caa gat ctc tat gag caa cta ctc att			288
Leu Ser Glu Ala Ile Glu Thr Gln Asp Leu Tyr Glu Gln Leu Ile			
85	90	95	
tta aat gct gca acc agc caa tta agc aaa act tct gac aaa ctt tta			336
Leu Asn Ala Ala Thr Ser Gln Leu Ser Lys Thr Ser Asp Lys Leu Leu			
100	105	110	
ttc aag gga tta aca gct tct cat cct gtc atc cgc tta gaa gct gct			384
Phe Lys Gly Leu Thr Ala Ser His Pro Val Ile Arg Leu Glu Ala Ala			
115	120	125	
tat cgt ctt gcc tgt atg aaa aat agc aag gta agt gat tac ctt tat			432
Tyr Arg Leu Ala Cys Met Lys Asn Ser Lys Val Ser Asp Tyr Leu Tyr			
130	135	140	
tct ttt atc tac aag tta cca gaa gaa att caa aac cta gcg gca act			480
Ser Phe Ile Tyr Lys Leu Pro Glu Glu Ile Gln Asn Leu Ala Ala Thr			
145	150	155	160
att ttc tta caa ctc gaa aca gaa gaa gct gat gct tat att cat cat			528
Ile Phe Leu Gln Leu Glu Thr Glu Glu Ala Asp Ala Tyr Ile His His			
165	170	175	
ttg ctc tct ccc aat aac ctg aca aga aac tat gtt gcc tat tta			576
Leu Leu Ser Ser Pro Asn Asn Leu Thr Arg Asn Tyr Val Ala Tyr Leu			
180	185	190	
att gga gag tac aaa caa aaa aga ttt ctt cca aca cta cgc tct tta			624
Ile Gly Glu Tyr Lys Gln Lys Arg Phe Leu Pro Thr Leu Arg Ser Leu			
195	200	205	
ctt aca agt gcc tct cct tta gat caa gaa ggc gct ttg tat gcg tta			672
Leu Thr Ser Ala Ser Pro Leu Asp Gln Glu Gly Ala Leu Tyr Ala Leu			
210	215	220	
ggc aaa ctg gaa gac tct ggt agc tat cct aga att aaa gct cta agc			720
Gly Lys Leu Glu Asp Ser Gly Ser Tyr Pro Arg Ile Lys Ala Leu Ser			
225	230	235	240
tct aga tcc aat cct gaa gta gta ctc gct gca gct cag aca tta tta			768
Ser Arg Ser Asn Pro Glu Val Val Leu Ala Ala Ala Gln Thr Leu Leu			
245	250	255	
ttc tta gag aaa gaa gaa gaa gct cta ccg atc cta acc aac ctt tgc			816
Phe Leu Glu Lys Glu Glu Ala Leu Pro Ile Leu Thr Asn Leu Cys			
260	265	270	
caa caa aaa ctt ctt cga gcc ctg tat acc gca cgt ttc ctc tcg caa			864

275	280	285	
gag aag ggt gaa gag ctt ctt ctt cca atc ttt tat aac gca aca caa Glu Lys Gly Glu Glu Leu Leu Leu Pro Ile Phe Tyr Asn Ala Thr Gln 290	295	300	912
gaa gaa att aga ctg aat act gct tta gca ctt gtt cat caa ggg tgt Glu Glu Ile Arg Leu Asn Thr Ala Leu Ala Leu Val His Gln Gly Cys 305	310	315	960
aca gat cct caa gtc ctc cac tat cta aca gaa atc tta gaa agt aaa Thr Asp Pro Gln Val Leu His Tyr Leu Thr Glu Ile Leu Glu Ser Lys 325	330	335	1008
gtt ctc cat cgc ata ttt tta cct act cac tcg aca gga aaa gct ata Val Leu His Arg Ile Phe Leu Pro Thr His Ser Thr Gly Lys Ala Ile 340	345	350	1056
cag ttc tgg aaa gaa tgc acc act ttt cct ctc atg agc caa gaa gac Gln Phe Trp Lys Glu Cys Thr Thr Phe Pro Leu Met Ser Gln Glu Asp 355	360	365	1104
aaa atg aga acg ttg gct atg tat cgg gta gcg gaa gat acc atc ctc Lys Met Arg Thr Leu Ala Met Tyr Arg Val Ala Glu Asp Thr Ile Leu 370	375	380	1152
tca gcg tta cta aaa tta ccc aat gac gcc tat ctt cct tac cta gag Ser Ala Leu Leu Lys Leu Pro Asn Asp Ala Tyr Leu Pro Tyr Leu Glu 385	390	395	1200
cgc atc ctc gcc tca caa aaa act ata cta gca gct aaa gct att gct Arg Ile Leu Ala Ser Gln Lys Thr Ile Leu Ala Ala Lys Ala Ile Ala 405	410	415	1248
ttt tta tcg gta aca gct cat cct cag gca ctt tct tta gtc tcg aaa Phe Leu Ser Val Thr Ala His Pro Gln Ala Leu Ser Leu Val Ser Lys 420	425	430	1296
gct gca tta act cct gga gac cct atc att cgc gct tac gct aat cta Ala Ala Leu Thr Pro Gly Asp Pro Ile Ile Arg Ala Tyr Ala Asn Leu 435	440	445	1344
gct tta tat aca atg acc aaa gat cct gag aaa aaa gct gtg cta tac Ala Leu Tyr Thr Met Thr Lys Asp Pro Glu Lys Lys Ala Val Leu Tyr 450	455	460	1392
cga tat gct gaa caa tta ata gag gat acc att tta ttc aca gat gct Arg Tyr Ala Glu Gln Leu Ile Glu Asp Thr Ile Leu Phe Thr Asp Ala 465	470	475	1440
gaa aat ccg ctt ccc tct cca agc tct tct tat tta cgc tac caa gta Glu Asn Pro Leu Pro Ser Pro Ser Ser Tyr Leu Arg Tyr Gln Val 485	490	495	1488
tcc cct gag acc cgc aca caa ctt atg cta gct att ttg gaa acc tta Ser Pro Glu Thr Arg Thr Gln Leu Met Leu Ala Ile Leu Glu Thr Leu			1536

gtt tct tcc aaa acg gat gaa gat atc cgc gtt ttt ctt tcc cta atg	515	520	525	1584
Val Ser Ser Lys Thr Asp Glu Asp Ile Arg Val Phe Leu Ser Leu Met				
aaa aaa acc cat tac aaa aat atc ccg atc tta tca gga ttg tta atg	530	535	540	1632
Lys Lys Thr His Tyr Lys Asn Ile Pro Ile Leu Ser Gly Leu Leu Met				
aga ata gtg gag				1644
Arg Ile Val Glu				
545				
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<212> PRT				
<213> Chlamydia trachomatis				
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Met Cys Asp Phe Pro Ser Ser Val Ser Gln Arg Ile Leu Phe Ser Cys	1	5	10	15
Arg Lys Ser Val Pro Gln Ala Leu Glu Ala Tyr Leu Glu Ala Ser Ala	20	25	30	
Thr Tyr Gln Gln His Asp Phe Ser Val Leu Arg Val Ile Ala Glu Ser	35	40	45	
Tyr Leu Gln Gln Ser Phe Leu Ser Glu Asp Thr Tyr Ile Arg Lys Ser	50	55	60	
Ala Ile Ile Gly Ala Gly Leu Ser Gly Ser Ser Glu Ala Leu Glu Leu	65	70	75	80
Leu Ser Glu Ala Ile Glu Thr Gln Asp Leu Tyr Glu Gln Leu Leu Ile	85	90	95	
Leu Asn Ala Ala Thr Ser Gln Leu Ser Lys Thr Ser Asp Lys Leu Leu	100	105	110	
Phe Lys Gly Leu Thr Ala Ser His Pro Val Ile Arg Leu Glu Ala Ala	115	120	125	
Tyr Arg Leu Ala Cys Met Lys Asn Ser Lys Val Ser Asp Tyr Leu Tyr	130	135	140	

Ser Phe Ile Tyr Lys Leu Pro Glu Glu Ile Gln Asn Leu Ala Ala Thr  
145 150 155 160

Ile Phe Leu Gln Leu Glu Thr Glu Glu Ala Asp Ala Tyr Ile His His  
165 170 175

Leu Leu Ser Ser Pro Asn Asn Leu Thr Arg Asn Tyr Val Ala Tyr Leu  
180 185 190

Ile Gly Glu Tyr Lys Gln Lys Arg Phe Leu Pro Thr Leu Arg Ser Leu  
195 200 205

Leu Thr Ser Ala Ser Pro Leu Asp Gln Glu Gly Ala Leu Tyr Ala Leu  
210 215 220

Gly Lys Leu Glu Asp Ser Gly Ser Tyr Pro Arg Ile Lys Ala Leu Ser  
225 230 235 240

Ser Arg Ser Asn Pro Glu Val Val Leu Ala Ala Ala Gln Thr Leu Leu  
245 250 255

Phe Leu Glu Lys Glu Glu Glu Ala Leu Pro Ile Leu Thr Asn Leu Cys  
260 265 270

Gln Gln Lys Leu Leu Arg Ala Leu Tyr Thr Ala Arg Phe Leu Ser Gln  
275 280 285

Glu Lys Gly Glu Glu Leu Leu Pro Ile Phe Tyr Asn Ala Thr Gln  
290 295 300

Glu Glu Ile Arg Leu Asn Thr Ala Leu Ala Leu Val His Gln Gly Cys  
305 310 315 320

Thr Asp Pro Gln Val Leu His Tyr Leu Thr Glu Ile Leu Glu Ser Lys  
325 330 335

Val Leu His Arg Ile Phe Leu Pro Thr His Ser Thr Gly Lys Ala Ile  
340 345 350

Gln Phe Trp Lys Glu Cys Thr Thr Phe Pro Leu Met Ser Gln Glu Asp  
355 360 365

370

375

380

Ser Ala Leu Leu Lys Leu Pro Asn Asp Ala Tyr Leu Pro Tyr Leu Glu  
385 390 395 400

Arg Ile Leu Ala Ser Gln Lys Thr Ile Leu Ala Ala Lys Ala Ile Ala  
405 410 415

Phe Leu Ser Val Thr Ala His Pro Gln Ala Leu Ser Leu Val Ser Lys  
420 425 430

Ala Ala Leu Thr Pro Gly Asp Pro Ile Ile Arg Ala Tyr Ala Asn Leu  
435 440 445

Ala Leu Tyr Thr Met Thr Lys Asp Pro Glu Lys Lys Ala Val Leu Tyr  
450 455 460

Arg Tyr Ala Glu Gln Leu Ile Glu Asp Thr Ile Leu Phe Thr Asp Ala  
465 470 475 480

Glu Asn Pro Leu Pro Ser Pro Ser Ser Tyr Leu Arg Tyr Gln Val  
485 490 495

Ser Pro Glu Thr Arg Thr Gln Leu Met Leu Ala Ile Leu Glu Thr Leu  
500 505 510

Val Ser Ser Lys Thr Asp Glu Asp Ile Arg Val Phe Leu Ser Leu Met  
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Lys Lys Thr His Tyr Lys Asn Ile Pro Ile Leu Ser Gly Leu Leu Met  
530 535 540

Arg Ile Val Glu

545

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41

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40

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31

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36